

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Vickie D. Wall

Appl No.	:	10/748,197	Confirmation No. 6732
Applicant	:	Chang-Seob Kim, et al.	
Filed	:	December 31, 2003	
Title	:	JELLY-ROLL TYPE BATTERY UNIT AND WINDING METHOD THEREOF AND LITHIUM SECONDARY BATTERY COMPRISING THE SAME	
TC/A.U.	:	1727	
Examiner	:	Maria J. Laios	
Docket No.	:	66249/L550	
Customer No.	:	23363	

### PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF  
Commissioner for Patents  
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Pasadena, CA 91109-7068  
June 17, 2011

Commissioner:

Applicants request that the Examiner's rejection of claims 1–3, 5, 6, 8, 12, 14, 20–22 and 24–28 (of which claims 1, 8, 14, and 20 are independent) in the Office action dated March 17, 2011, Applicants' response dated May 17, 2011, and the Advisory Action dated June 1, 2011 be reviewed.

#### Claim rejections under 35 U.S.C. § 103

Claims 1–3, 8, 14, 20, and 24–26 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Narukawa et al. (U.S. Pat. No. 5,834,133, hereinafter "Narukawa '133") in view of Vourlis (U.S. Pat. No. 6,054,233, hereinafter "Vourlis"). Claims 5, 6, 12, 21, 22, 27, and 28 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Narukawa '133 in

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view of Vourlis and further in view of Narukawa et al. (U.S. Pat. No. 5,508,122, hereinafter “Narukawa ‘122”).

Applicants respectfully traverse as follows:

Claim 1 recites, in relevant part (emphasis added):

the first electrode tab is formed by folding a cut portion of an uncoated area of the first electrode current collector toward an upper edge thereof,

...

the first electrode tab extends past the upper edge of the first electrode current collector, is disposed at substantially the center of the battery unit, at an innermost layer of the battery unit, and partially overlaps and faces the second electrode tab.

Independent claims 8, 14, and 20 recite substantially similar limitations.

Applicants respectfully submit that the cited references do not appear to disclose or suggest at least the above emphasized limitations of claims 1, 8, 14, and 20.

Pages 3–4 of the Office action recite, in relevant part:

Narukawa et al. discloses the cut tab of the positive electrode is located on the outer surface of the electrode assembly (Figures 6 and 8) but does not disclose that the tab formed by folding is located substantially in the center of the battery electrode unit, at the innermost layer of the electrode unit. However this would be within the skill of an ordinary artisan start the winding electrode unit with the folded portion since this would apply pressure to the folded area and since there is an infinite number of predictable solutions.

Therefore, the “positive electrode collector tab 221” formed from the “incision portion 222” of Narukawa ‘133 appears to be equated with the “first electrode tab” of claims 1, 8, 14, and 20.

However, Applicants respectfully submit that there is no apparent reason why a person of ordinary skill in the art at the time the invention was made would have modified Narukawa ‘133 to arrive at the claimed embodiments of claims 1, 8, 14, and 20, which include the above limitations.

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For example, column 9, lines 59–61 of Narukawa '133 recite (emphasis added):

A U-shaped incision portion 222 defined by three incision lines extending through the positive-current collector is formed in the two-side current collector-exposed portion.

Furthermore, column 10, lines 28–39 recite (emphasis added):

The positive-electrode plate 220 and the negative-electrode plate 230 are rolled with the separator 250 of polyethylene interposed therebetween to form the electrode roll 210 such that the one-side current collector-exposed portion of the positive-electrode plate 220 faces outward and the two-side current collector-exposed portion thereof is located on the outermost periphery of the electrode roll 210. This permits the current collector-exposed portion to come in contact with the interior surface of the battery casing, thereby providing electrical connection between the positive electrode plate and the battery casing also functioning as a positive-electrode external terminal.

Therefore, because the “incision portion 222” is formed on the “two-side current collector-exposed portion” and because the “two-side current collector-exposed portion” is described as being located at an “outermost periphery of the electrode roll 210” so that “the current collector-exposed portion [can] come in contact with the interior surface of the battery casing, thereby providing electrical connection between the positive electrode plate and the battery casing also functioning as a positive-electrode external terminal”, there is no apparent reason why a person of ordinary skill in the art at the time the invention was made would have modified Narukawa '133 and combined it with the disclosures of Vourlis and Narukawa '122 to arrive at the claimed embodiments of claims 1, 8, 14, and 20 because a person of ordinary skill in the art at the time the invention was made would have understood that moving the “two-side current collector-exposed portion” to the center of the “electrode roll 210” would have removed the electrical connection between the battery casing and the positive electrode and would have reduced the amount of active material located within the volume of the battery, thereby reducing energy density.

The Advisory Action states, in relevant part:

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In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The Advisory Action also states, in relevant part:

Furthermore, In response to applicant's argument that the reference does not disclose the tab is substantially the center of the battery unit on the innermost layer of the battery unit, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

Applicants respectfully submit that the previously presented argument was intended to explain why a person of ordinary skill in the art at the time the invention was made would not have combined the references, when considered as a whole, to arrive at the claimed embodiments of claims 1, 8, 14, and 20.

Therefore, Applicants respectfully submit there is no apparent reason why a person of ordinary skill in the art at the time the invention was made would have combined the cited references to arrive at a first electrode tab "disposed at substantially the center of the battery unit, on an innermost layer of the battery unit" of the claimed embodiments of claims 1, 8, 14, and 20. As such, Applicants respectfully request that the rejections of these claims be withdrawn and that these claims be allowed.

Because claims 2, 3, 5, 6, and 24–26 depend, directly or indirectly, from claim 1; claim 12 depends directly from claim 8; claims 27 and 28 depend, directly or indirectly, from claim 14; and claims 21 and 22 depend, directly or indirectly, from claim 20, they each incorporate all the terms and limitations of their respective base claim in addition to other limitations which further patentably distinguish these claims over the cited references. Therefore, Applicants respectfully

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request that the rejections of claims 2, 3, 5, 6, 12, 21, 22, and 24–28 be withdrawn and that these claims be allowed.

Respectfully submitted,  
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